

ON DITROPIDUS AND ALLIED GENERA  
(COLEOPTERA, CHRYSOMELIDAE).

By ARTHUR M. LEA, F.E.S.

[Contribution from the South Australian Museum.]

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The Australian Chrysomelidae of the subfamily Cryptocephalides may be regarded as belonging to two sections:—

1. *Cryptocephalides verae*. The species of this section have the scutellum large and usually sloping upwards to its end, and the antennae more or less filiform.

2. *Monachides*. The species of this section have a small scutellum, never sloping upwards, and the antennae have a five or six-jointed club. The main genus is *Ditropidus*, and the ones I am acquainted with may be thus tabulated:—

A. Antennal club composed of five joints.

a. Intercoxal process of prosternum longer than wide ... .. *Prasonotus*

aa. Intercoxal process transverse.

b. Joints of the club rather wide and short *Ditropidus*(1)

bb. Joints longer and lax ... .. *Elaphodes*

AA. Antennal club composed of six joints.

B. Eyes close together ... .. *Coenobius*

BB. Eyes distant.

C. Scutellar lobe of pronotum entire ... .. *Polyachus*

CC. Scutellar lobe notched ... .. *Euditropidus*

DITROPIDUS.

The species of this genus are occasionally extremely abundant on wattles (*Acacia*, spp.), but they occur on many other kinds of trees and shrubs. They are short, thick-set insects, the male occasionally with very powerful jaws; the female has a large, deep, and more or less circular apical fovea on the abdomen, but the males of a few species also have the abdomen foveate, although the fovea on such specimens is much shallower, smaller than on the females, and is not margined with hairs, as it frequently is in the females; in fact on the males of most species there may be seen a vague depression on the apical segment, if this is viewed from several directions; the eyes of the male are usually larger and closer together than those of the female, their distance apart is frequently a useful specific character, but it needs to be considered with the sex; the front legs

(1) *D. antennarius* has exceptional antennae in the male.

are often longer and stouter, and the front and middle tarsi are often more dilated; the male is usually smaller than the female, but in the big-jawed forms it is usually larger; although I have seldom considered it necessary to describe the proportions of the antennal joints they have in every instance been examined, and are short, with the five apical joints forming a kind of club; on some species, especially on their females, the five joints are moderately long, approaching those of *Elaphodes*, but it was not considered desirable to refer to that genus any species whose prothorax and elytra are entirely glabrous. The shagreening of parts of the surface of many species is very conspicuous, but on some it is difficult to decide as to whether the surface should be regarded as shagreened, or as densely and finely punctate. Owing to the scutellar lobe the length of the prothorax is distinctly more along the middle than elsewhere, and its proportions are of use for identification, but these are usually sexually variable; the punctures on the prothorax are often different on the sides to what they are in the middle, being usually denser and coarser, but sometimes smaller and sparser, they frequently become elongated and confluent, or they may be replaced by striae, especially in the front angles; the base is finely serrated, and the serrations are very distinct on pale specimens whose prothorax and elytra are not closely applied together; but on dark ones with those parts close together the serrations are usually concealed. The scutellum is always small, but its apparent length varies according as to whether the prothorax is closely applied to the elytra or not. The elytra usually have rows of distinct punctures, not set in striae on the disc, but on the sides the punctures usually become larger, and set in more or less deep striae, these are two or three (rarely four) in number, but as the depth of the inner one varies, it is not always easy to decide as to their number, the marginal stria, however, is frequently impunctate; on most of the species the shoulders are smooth, obtusely subtuberculate, and interrupt some of the lateral striae. On many species the third segment of the abdomen, although distinct on each side, disappears in the middle. The genus is such a large one (with the exception of *Paropsis* it consists of a greater number of species than any other of the family), so many of the species have varietal forms, and so many may be identified with certainty only from the males, or by characters which may not be readily used for tables, that I have not considered it advisable to give a table of the genus. The species accordingly have been arranged in groups, which may simplify future identifications, but owing to the

numerous varietal forms too much reliance should not be placed even on these.

In the following lists species to which an asterisk (\*) have been prefixed are unknown to me, and their positions have been assigned to them by published characters.

*Prothorax and elytra pubescent.*

<i>comans</i> , Chp.	<i>intonsus</i> , Lea
<i>convexiusculus</i> , Chp.	<i>latifrons</i> , Lea
<i>discicollis</i> , Lea	<i>puberulus</i> , Chp.
<i>flavipes</i> , Lea	<i>pubescens</i> , Lea
<i>geniculatus</i> , Lea	* <i>semicircularis</i> , Baly.
<i>gibbicollis</i> , Lea	<i>whitei</i> , Lea
<i>holoporphyrus</i> , Lea	

*Prothorax pubescent, but elytra glabrous.*

* <i>albertisi</i> , Chp.	* <i>godeffroyi</i> , Chp.
* <i>comptus</i> , Chp.	<i>gymnopterus</i> , Lea
<i>crassipes</i> , Lea	<i>hirticollis</i> , Baly.
<i>cribripennis</i> , Lea	* <i>lacordairei</i> , Chp.
<i>cupricollis</i> , Lea	<i>mirus</i> , Lea
<i>fasciatus</i> , Baly.	<i>modicus</i> , Lea
( <i>canescens</i> , Chp.)	<i>pubicollis</i> , Chp.
<i>flavipennis</i> , Lea	<i>striatus</i> , Lea
<i>globulus</i> , Lea	<i>strigosus</i> , Baly.

*Prothorax and elytra both glabrous.*

*A. Elytra not entirely dark.*

* <i>aciculatus</i> , Chp.	<i>longus</i> , Lea
<i>alphabeticus</i> , Lea	<i>marginipennis</i> , Lea
<i>amabilis</i> , Baly.	<i>metallicus</i> , Lea
<i>antennarius</i> , Baly.	<i>nigrbasis</i> , Lea
( <i>antennarius</i> , Chp.)	<i>nigricollis</i> , Lea
( <i>baccaeformis</i> , Chp., var.)	<i>nigriventris</i> , Lea
<i>apiciflavus</i> , Chp.	* <i>obtusus</i> , Chp.
<i>apicipennis</i> , Lea	<i>ornatus</i> , Baly.
<i>basiceps</i> , Lea	* <i>pallidipennis</i> , Chp.
<i>bimaculatus</i> , Lea	* <i>pastus</i> , Chp.
* <i>biplagiatus</i> , Baly.	<i>pictus</i> , Baly.
<i>cornutus</i> , Baly.	<i>pulchellus</i> , Baly.
<i>corrugatus</i> , Lea	<i>pulicosus</i> , Lea
<i>cribricollis</i> , Lea	* <i>rufescens</i> , Chp.
<i>cuneatus</i> , Chp.	* <i>rufocupreus</i> , Baly.
<i>davisi</i> , Saund.	<i>schmelzi</i> , Chp.
<i>dimidiatus</i> , Baly., var.	<i>serenus</i> , Baly.
<i>elutus</i> , Lea	* <i>subcylindricus</i> , Baly.
* <i>fulvus</i> , Baly.	* <i>submetallescens</i> , Baly.
<i>imitator</i> , Lea	<i>suffriani</i> , Chp.
<i>impuncticollis</i> , Lea	<i>tarsalis</i> , Lea
<i>jacobyi</i> , Baly.	* <i>tarsatus</i> , Baly.
<i>laevicollis</i> , Lea	<i>variceps</i> , Lea
* <i>lateritius</i> , Chp.	<i>varicollis</i> , Lea
<i>latericollis</i> , Lea	<i>viridiaeneus</i> , Lea
<i>laticollis</i> , Lea	<i>xanthurus</i> , Lea
<i>longipes</i> , Lea	

*B. Elytra entirely dark, but prothorax not.*

- |                                 |                            |
|---------------------------------|----------------------------|
| * <i>aeneipennis</i> , Boi.     | <i>mandibularis</i> , Lea  |
| <i>caeruleipennis</i> , Lea     | <i>nigripennis</i> , Lea   |
| <i>davisi</i> , Saund., var.    | <i>pascoei</i> , Baly.     |
| <i>dimidiatus</i> , Baly., var. | <i>ruficollis</i> , Saund. |
| <i>elegantulus</i> , Baly.      | <i>subsimilis</i> , Lea    |
| <i>fugitivus</i> , Chp.         | <i>semicrudus</i> , Lea    |
| <i>maculicollis</i> , Chp.      |                            |

*C. Elytra and prothorax entirely dark.**C. 1. Legs more or less red.<sup>(2)</sup>*

- |                              |                               |
|------------------------------|-------------------------------|
| <i>albiceps</i> , Lea        | <i>macrops</i> , Lea          |
| <i>aurichalceus</i> , Suff.  | <i>maculifrons</i> , Chp.     |
| <i>basiventris</i> , Lea     | <i>majorinus</i> , Lea        |
| * <i>bicolor</i> , Chp. (?)  | <i>micans</i> , Lea           |
| <i>clypealis</i> , Lea       | <i>oblongipennis</i> , Lea    |
| * <i>coerulescens</i> , Chp. | <i>ochropus</i> , Er.         |
| <i>costatus</i> , Chp.       | <i>odevahni</i> , Baly.       |
| <i>cribriceps</i> , Lea      | * <i>opulentus</i> , Chp.     |
| * <i>cupreus</i> , Chp. (?)  | <i>ovatulus</i> , Chp.        |
| * <i>facialis</i> , Baly.    | <i>punctipennis</i> , Lea     |
| * <i>gagatinus</i> , Er. (?) | <i>rufipes</i> , Saund.       |
| * <i>gibbulus</i> , Suff.    | <i>scitulus</i> , Lea         |
| <i>glossatus</i> , Lea       | <i>sobrinus</i> , Lea         |
| <i>insularis</i> , Lea       | <i>splendidus</i> , Chp.      |
| ( <i>chalceus</i> , Lea)     | <i>strigiceps</i> , Lea       |
| ( <i>lateralis</i> , Lea)    | <i>subaeneus</i> , Chp.       |
| * <i>laetus</i> , Baly.      | <i>tibialis</i> , Chp.        |
| * <i>laevigatus</i> , Baly.  | <i>viriditinctus</i> , Lea    |
| <i>lentulus</i> , Chp.       | * <i>xanthostomus</i> , Suff. |

*C. 2. Legs entirely dark.<sup>(3)</sup>*

- |                               |                                   |
|-------------------------------|-----------------------------------|
| <i>abdominalis</i> , Chp.     | * <i>costipennis</i> , Baly.      |
| <i>angustifrons</i> , Chp.    | * <i>distinguendus</i> , Chp. (?) |
| * <i>anthracinus</i> , Er.    | <i>doriae</i> , Chp.              |
| <i>armatus</i> , Lea          | * <i>duboulayi</i> , Baly.        |
| * <i>ater</i> , Boi.          | <i>foveiventris</i> , Lea         |
| * <i>boops</i> , Suff.        | <i>frontalis</i> , Chp.           |
| <i>brachysomus</i> , Lea      | * <i>fulgidus</i> , Suff.         |
| <i>brevis</i> , Lea           | <i>gagates</i> , Lea              |
| <i>caeruleus</i> , Lea        | * <i>geminatus</i> , Chp.         |
| <i>carbonarius</i> , Baly.    | <i>glaber</i> , Lea               |
| <i>carinataiceps</i> , Lea    | * <i>globus</i> , Boi.            |
| * <i>cavifrons</i> , Chp.     | (? <i>saprinodes</i> , Suff.)     |
| <i>coelestis</i> , Lea        | (? <i>seminulum</i> , Germ.)      |
| <i>cognatus</i> , Lea         | * <i>histeroides</i> , Suff.      |
| <i>concolor</i> , Saund.      | <i>ignitus</i> , Lea              |
| ( <i>ater</i> , Saund., var.) | <i>imperialis</i> , Chp.          |
| ( <i>cistellus</i> , Germ.)   | <i>indistinctus</i> , Lea         |
| ( <i>maxillosus</i> , Suff.)  | <i>insignis</i> , Lea             |
| <i>congenitus</i> , Lea       | * <i>jansoni</i> , Baly.          |

(2) On some described varieties entirely dark.

(3) On some described varieties partly reddish; the base of the front femora sometimes obscurely red.

<i>labiatus</i> , Chp.	<i>rotundatus</i> , Lea
<i>laminatus</i> , Chp.	* <i>saprinodes</i> , Suff.
<i>lobicollis</i> , Lea	<i>scutellaris</i> , Lea
<i>melasomus</i> , Lea	<i>solitus</i> , Lea
<i>nitiduloides</i> , Baly.	<i>striatipennis</i> , Lea
<i>nobilis</i> , Chp.	<i>striatopunctatus</i> , Lea
<i>obscuripennis</i> , Lea	<i>strigicollis</i> , Lea
* <i>obsidianus</i> , Chp.	<i>subaeneus</i> , Chp., var.
* <i>ophthalmicus</i> , Suff.	<i>subarmatus</i> , Lea
<i>palmerstoni</i> , Blackb.	* <i>trabeatus</i> , Chp. (?)
* <i>phalacroides</i> , Baly.	<i>triangulifer</i> , Lea
<i>puncticollis</i> , Lea	<i>tropicus</i> , Lea
<i>punctivarius</i> , Lea	<i>ventralis</i> , Lea
<i>pygidialis</i> , Lea	<i>venustus</i> , Lea
* <i>pyriformis</i> , Suff.	<i>vigilans</i> , Lea
<i>quadratipennis</i> , Lea	<i>viridimicans</i> , Lea

*C. 3. Minute species, usually entirely glabrous.*

<i>brevicollis</i> , Lea	<i>rufimanus</i> , Lea
<i>coriaceus</i> , Lea	<i>similis</i> , Lea
<i>opaciceps</i> , Lea	<i>tenuifrons</i> , Lea
<i>punctulum</i> , Chp.	<i>tranquillus</i> , Lea
<i>rivularis</i> , Lea	<i>vagens</i> , Lea
<i>rotundiformis</i> , Lea	<i>vicarius</i> , Lea

*D. Front angles of prothorax of male flavous.*

<i>flavolateralis</i> , Lea	<i>minutus</i> , Lea
<i>lateroapicalis</i> , Lea	<i>pallipes</i> , Lea

*E. Miscellaneous.*

<i>brunneipennis</i> , Lea	<i>macrocephalus</i> , Lea
<i>carinatus</i> , Lea	<i>sculptipennis</i> , Lea
<i>flavoapicalis</i> , Lea	<i>subsuturalis</i> , Lea

DITROPIDUS CONCOLOR, Saund.

*D. ater*, Saund.

*D. cistellus*, Germ.

*D. maxillosus*, Suff.

The male of this species has a large head with very prominent jaws, the labrum is large, blackish, often with the sides obscurely reddish, and the inter-ocular space is wide, with a large median depression; on the female the head is much smaller, the jaws are very much smaller, and the inter-ocular space is less. The front legs of the male are considerably longer and stouter than in the female; and its abdomen, owing to its incurvature, has the second, third, and fourth segments shorter in the middle; the female has a large apical fovea margined with pubescence. The prothoracic punctures are small but dense, and are usually, but not always, feebly impressed, towards the sides they become more or less confluent, or the sides may be substrigose. Specimens

vary considerably in size, they are usually of an uniform bronze or coppery-bronze, except that some of the basal joints of the antennae are reddish; but a deep blue variety is common; specimens are occasionally black or bluish-green, or purple, and the prothorax and elytra are not always of the same shade of colour. There were specimens in the Blackburn collection labelled by Chapuis as *maxillosus* (a male) and *cistellus* (a female). The specimens before me are from many localities in New South Wales, South and Western Australia, and from Queensland (Bowen), and Victoria (Melbourne).

The other large or fairly large described blue species before me differ from the blue variety as follows:—

*D. abdominalis* has the abdomen wholly or partly red.

*D. coelestis* has denser and more sharply defined punctures on the head and prothorax, head with a circular interocular fovea representing the median line, and metasternum with coarser and less crowded punctures on sides.

*D. vigilans* has eyes much closer together in the female, and almost touching in the male, prothoracic punctures sparser and more minute, and almost absent from the sides.

*Prothorax and elytra pubescent.*

DITROPIDUS PUBESCENS, n. sp.

♂. Coppery-bronze, labrum, antennae, palpi, and legs red. Moderately densely clothed all over with white pubescence.

*Head* with dense, partially concealed punctures. *Eyes* widely separated. *Prothorax* about twice as wide as the median length; with sparser and smaller punctures than on head. *Elytra* shagreened and densely punctate, striae feeble on sides and scarcely traceable elsewhere. *Legs* stout, the front ones somewhat longer than the others. Length (♂, ♀), 3.25-4.5 mm.

♀. Differs in having the head somewhat smaller, antennae thinner, front legs no longer than the hind ones, and in the abdomen.

*Hab.*—South Australia: Leigh Creek (Blackburn's collection). Type, I. 10952.

An oblong-elliptic rather densely clothed species, with elytra feebly striated even on the sides; on some specimens, apparently owing to a parting in the pubescence, there seems to be a carina above each eye. It is more oblong and with much denser clothing than on *whitei* and *pubicollis*, the legs entirely reddish or almost so, and the finer sculpture different. The tips of some of the antennal and tarsal joints are often

infuscated. On the middle of the pronotum the clothing is usually somewhat rusty, on the pygidium it is usually denser along the middle than elsewhere, giving the appearance as of a median line; on the elytra it occasionally has a vaguely striped appearance. The distance between the eyes is about the width of the clypeus in the male, slightly less in the female.

Var. A. Two specimens from Queensland (Longreach, A. M. Lea) and one from South Australia (Rev. A. P. Burgess) are rather wider and less oblong than usual, but I can find no other distinctions.

Var. B. Two specimens from Leigh Creek are like the preceding variety, but have the knees blackish.

Var. C. Three specimens from Western Australia (Cue and Ankertell, H. W. Brown), one smaller (3.3-25 mm.) than usual, and have the tarsi and club blackish, one has the knees also blackish, and another the knees, hind femora, and parts of the other femora; on two of them the prosternum and mesosternum are reddish.

#### DITROPIDUS FLAVIPES, n. sp.

♂. Coppery or coppery-bronze; labrum, antennae, palpi, and legs flavous, tips of some of the antennal joints and the claws blackish, or at least infuscated. Rather densely clothed (except on parts of under-surface) with white pubescence.

*Head* with dense, partially concealed punctures. Eyes widely separated. *Prothorax* not twice as wide as the median length, somewhat gibbous in front, with a shallow depression near base; with rather dense, partially concealed punctures. *Elytra* subquadrate; with dense, partially concealed punctures, lateral striae well defined, the others feeble. *Front legs* slightly longer than the others. Length (♂, ♀), 2.25-3 mm.

♀. Differs in being more robust, head slightly smaller, eyes more distant, antennae somewhat thinner, front legs no longer than the hind ones, and in the abdomen.

*Hab.*—South Australia: Leigh Creek, Oodnadatta (Blackburn's collection), Morgan (Mrs. Kreuzler). Type, I. 10953.

On most of the specimens the clothing is entirely white, but on some of them the pubescence on the middle of the pronotum has a rusty appearance; where it has been abraded from the upper-surface the punctures are seen to be fairly dense and sharply defined; the punctures on the clypeus are usually less concealed than on other parts of the head. From above the hind angles of the prothorax seem rather acute, but from the sides they are

seen to be rectangular. On the males there is usually a feeble depression on the apical segment of the abdomen, but it is very different to the large round fovea of the female. Structurally and in colour, except that the legs are paler, it is close to the preceding species, but is smaller, slightly narrower, the prothorax with more distinct punctures, somewhat different hind angles, and a shallow subbasal depression, of which there is not a trace on that species. In appearance it is very close to *gymnopterus*, but the elytra are not glabrous; it is also close to *intonsus*, but is more oblong, due to the distinctly longer elytra, and the prothoracic punctures are more distinct. In general appearance it is also very close to the species commented upon as possibly *puberulus*, but is at once distinguished by the eyes of the male being considerably smaller and more distant; on that species the distance between them at their nearest, is scarcely more than the length of the white-clothed canthus of each eye; on the present species the space is fully twice the length of each canthus, the punctures on the prothorax are also a trifle larger and more evenly distributed.

A female, from Morgan, has the club of the antennae, the tarsi, and the hind femora more or less deeply infuscated. A female, from Oodnadatta, is rather larger (3.25 mm) than usual, and the depression on the prothorax is more vague than on most specimens.

*Prothorax pubescent, but elytra glabrous.*

DITROPIDUS CRASSIPES, n. sp.

♂. Coppery-bronze, with a slight greenish gloss; labrum, antennae, palpi, and legs reddish; club, claw-joints, and claws blackish or infuscated. Head, prothorax, and under-surface with rather dense, white pubescence, becoming sparser on legs.

*Head* with fairly numerous but not very large punctures, becoming more crowded on clypeus. Eyes widely separated. *Prothorax* not twice as wide as the median length, sides strongly rounded; punctures small and numerous, but not crowded. *Elytra* rather strongly narrowed posteriorly; with rows of large, deep punctures, seriate only about base and middle, set in deep striae at the sides and apex; interstices impunctate. *Legs* moderately long and very thick. Length (♂, ♀), 3.375 mm.

♀. Differs in having somewhat smaller head and antennae, prothorax at base twice as wide as the medium length, elytra less narrowed posteriorly, legs shorter and much less thick, and in the abdomen.



*Hab.*—North-western Australia (Macleay Museum), Derby, W. D. Dodd. Type, I. 10920.

About the size of *whitei* and *concolor*, but readily distinguished from all the metallic hairy species by the unusually thick red legs of the male, all the legs are stout, the front ones especially, although they are but little longer than the hind ones; on the female the legs are of normal size, her tibiae and tarsi being only about half the width of those parts in the male; the front tibiae of the male from some directions appear to have a slight tooth where the apical diminution begins; in the female the distance between the eyes is equal to the width of the clypeus, in the male it is slightly less. On each of the three specimens before me the shoulders are thickened and somewhat purplish, and the disc of the pronotum is partly glabrous (but this may be due to abrasion).

DITROPIDUS CRIBRIPENNIS, n. sp.

♂. Bronze or copper-bronze; labrum, palpi, basal half of antennae, and parts of legs more or less reddish. Head, prothorax, under-surface, and legs moderately clothed with white pubescence.

*Head* with crowded asperate punctures; median line fairly distinct. Eyes moderately separated. *Prothorax* about twice as wide as the median length, front angles widely rounded off; punctures dense and fairly large, becoming crowded on sides. *Elytra* slightly longer than wide, slightly narrowed posteriorly; with rows of large deep punctures, becoming smaller but set in deep striae at the sides and posteriorly; interstices finely wrinkled and punctate, usually narrower than seriate punctures. *Legs* moderately long, front ones slightly longer and thicker than hind ones. Length (♂, ♀), 2.25-3 mm.

♀. Differs in being more robust, head smaller, antennae thinner, legs thinner, the front ones no longer than the hind ones, and in the abdomen.

*Hab.*—Western Australia: Geraldton (W. D. Dodd and A. M. Lea), Perth (Blackburn's collection), Swan River, Rottneest Island (A. M. Lea). Type, I. 10921.

An oblong species with coarser elytral punctures than on any species (known to me) with pubescent prothorax; the size and outlines are much as in *gymnopterus*, but on that species the seriate elytral punctures are not even as large as those on the prothorax of this species; the eyes of the male of the present species are also closer together, the distance between them being slightly more than the length of the basal

joint of the antennae, in the female it is half as much again. The club varies from moderately infuscated to quite black; the dark parts of the legs are the tarsi, knees, and most of the hind femora, but the extent of the genicular and femoral infuscation varies; the prothorax and elytra are often of a uniform shade, but sometimes the prothorax has a more coppery appearance than the elytra.

Two females, from Rottneist Island, have the seriate punctures somewhat smaller than usual, although still of large size, being distinctly narrower than the interstices, some males associated with them, however, have punctures of normal size. Two specimens, sexes, from the Swan River, have all the punctures larger and denser than usual, on the pronotum some of them being confluent, but on each of them there is a narrow impunctate line on the basal half of the pronotum.

*Prothorax and elytra both glabrous.*

*A. Elytra not entirely dark.*

DITROPIDUS ALPHABETICUS, n. sp.

♂. Dark coppery-green (or blue); under-surface black, with or without a metallic gloss; elytra flavous with the suture (rather widely and irregularly), base (with an extension on each shoulder), sides (narrowly), and a large median spot on each (sometimes joined to the shoulder), coppery-green, or blue, or purple; labrum and basal half of antennae flavous. Under-surface and legs with sparse, whitish pubescence, sparser on head.

*Head* with fairly dense, sharply defined punctures, becoming crowded in front. Eyes widely separated. *Prothorax* about twice as wide as the median length, strongly narrowed in front; punctures rather small and sharply defined, but nowhere dense. *Elytra* slightly wider than long; with rows of small punctures, on the sides set in distinct striae. Length (♂, ♀), 3-4 mm.

♀. Differs in being more robust, elytra less narrowed posteriorly, antennae and legs thinner, and in the abdomen.

*Hab.*—South Australia (Macleay Museum), Port Lincoln (Blackburn's collection). Type, I. 4408.

Allied to *ornatus*, but the dark parts of the prothorax and elytra with a conspicuous metallic gloss, the elytral markings different, and the inter-ocular space glabrous; in some of these characters the types agree with South Australian specimens that I have regarded as varieties of *ornatus*, but the elytral markings are essentially different, the legs of the males are less powerful, and the punctures are not quite the same. The dark basal and sutural markings of the elytra are

T-shaped; on specimens with the humeral and discal markings conjoined the resemblance is to an irregular M; on some specimens the front half of the clypeus is almost as pale as the labrum, on others it is scarcely paler than the parts behind it; on some the bases of the front and middle femora, or of the front ones only, are obscurely diluted with red. The median line of the head varies somewhat and is usually more distinct on the female than on the male; on the male the eyes are separated about the width of the clypeus, on the female about one-fourth more; the male is without a trace of an abdominal fovea, but on the female it is unusually large.

DITROPIDUS LATERICOLLIS, n. sp.

♀. Coppery-green and flavous, club and claws infuscated. Under-surface and legs with sparse, white pubescence, head still more sparsely clothed.

*Head* shagreened and with dense punctures; median line moderately distinct. Eyes rather widely separated. *Prothorax* about twice as wide as the median length; with fairly dense and sharply defined but not very large punctures, slightly denser in middle than on sides. *Elytra* slightly longer than wide, sides gently rounded; with rows of small punctures, becoming larger and set in distinct striae on the sides; interstices with very minute punctures. *Abdomen* with a large, round, deep, apical fovea. Length, 3.5 mm.

*Hab.*—Queensland: Brisbane (A. M. Lea). Type, I. 10963.

The coppery-green parts of the type are the head (except the muzzle), prothorax (the sides obscurely diluted with flavous), scutellum, and a narrow basal edging of the elytra; the sterna have a more reddish tinge than the abdomen and legs. The distance between the eyes is about equal to the length of the front tarsi, but it would no doubt be less in the male. The hind angles of the prothorax from the sides are seen to be slightly less than right angles, but from above they appear to be much more acute, the front ones are really rectangular, but from above appear to be widely rounded off; in fact from some directions the sides and apex of the prothorax appear to form a perfect semi-circle. The seriate punctures on the elytra are really rather small, but appear to be much larger owing to waterlogging. On the type the finer sculpture of the head has a curious concentric appearance, but this is scarcely evident on a second female (from Cairns, Dr. E. W. Ferguson); this specimen also differs in having the dark parts more of a

purplish-blue and scarcely metallic, the flavous sides of the prothorax wider and sharply defined, the head less shagreened and with more distinct punctures, and the elytral interstices with slightly larger (although still very small) punctures; the seriate punctures, however, have the same waterlogged appearance.

DITROPIDUS IMITATOR, n. sp.

♀. Dark coppery-green and flavous. Under-surface and legs moderately clothed with white pubescence, head more sparsely clothed.

*Head* densely punctate and shagreened; median line moderately distinct. Eyes rather widely separated. *Prothorax* with dense and sharply defined but not very large punctures on disc, becoming crowded and confluent or substrigose on sides. *Elytra* with rows of distinct but not very large punctures, becoming larger and set in distinct striae on sides; interstices with sparse and minute punctures. *Pygidium* with a slight median carina. Length, 3.25-3.5 mm.

*Hab.*—Australia (old collection). Type, I. 10981.

Allied to, and with outlines as noted for the preceding species, but prothorax entirely dark, and with much denser punctures, becoming still denser and substrigose on the sides; at first glance it appears as if near *flavipennis*, but the pronotum is glabrous. The coppery-green parts are the head (a variable amount of the muzzle excepted), prothorax and scutellum; the elytra are flavous with a slight metallic gloss, but the suture and base are very narrowly dark; the antennae of both specimens under examination are broken, but the basal joints are pale.

DITROPIDUS VARIICEPS, n. sp.

♀. Red; part of head, scutellum and most of elytra bronzy with a coppery gloss; club black, parts of tarsi and of abdomen infuscated. Head, under-surface, and legs with very short, white pubescence.

*Head* rather large; with small, dense, and frequently obliquely confluent punctures; median line shallow. Mandibles rather large. Eyes widely separated. *Prothorax* at the base more than twice as wide as the median length; with small and not very dense punctures. *Elytra* suboblong; with rows of fairly large punctures, becoming smaller but set in deep striae on the sides. Front *tibiae* slightly longer than hind ones. Length, 2.5-2.75 mm.

*Hab.*—South Australia: Mount Lofty (J. G. O. Tepper), Port Lincoln (Blackburn's collection). Type, I. 4407.

Readily distinguished, by the bright red prothorax, from all other species having the elytra metallic with pale sides and apex; in general appearance it is close to *elegantulus*, but that species has the elytra entirely dark. The dark part of the head is basal, but it is usually triangularly encroached upon by the red, or it may even be divided into two; the pale portions of the elytra (which are more flavous than red) are lateral and apical, the apical portion occupies from about one-sixth to about one-fourth of the length; the infuscation of the abdomen is usually confined to the second and third segments, but sometimes extends to the base of its intercoxal process. The incurvature of the prosternal process is rather deeper than usual. One specimen has the head entirely red, the dark portion of the elytra reduced in size, and the infuscation of the abdomen and tarsi feeble. Another specimen has the pale portions of the elytra reduced to very narrow lateral and apical edgings, and its abdomen, except for the tip, is almost entirely black. There are seven males before me, but I have been unable to identify the female amongst the many species examined; as the species is certainly close to *elegantulus* the female may have the prothorax entirely dark; but the following species (which is also allied) has the prothorax red in both sexes.

*B. Elytra entirely dark, but prothorax not.*

DITROPIDUS SEMICRUDUS, n. sp.

♂. Head, basal half of antennae, palpi (tips excepted), prothorax (extreme base excepted), and legs (the tarsi usually partly infuscated) red, elsewhere black, but the elytra with a bronzy, or slightly coppery gloss. Under-surface and legs with sparse, white pubescence; head almost glabrous.

*Head* with small and fairly dense but not at all confluent punctures; median line rather slightly impressed. *Eyes* rather widely separated. *Prothorax* at base more than twice as wide as the median length, sides strongly rounded; with very small and comparatively sparse punctures. *Elytra* suboblong; with rows of rather small punctures, becoming larger and set in rather deep striae on the sides; interstices with very minute punctures. Length (♂, ♀), 2.75-3.25 mm.

♀. Differs in having thinner club and legs, elytra less narrowed posteriorly, and abdomen larger and with a large apical fovea.

*Hab.*—Victoria: Alps and Dividing Range (Blackburn's collection, No. 4815); Tasmania: Hobart, Mount Wellington, Huon River, and Sheffield (A. M. Lea); South Australia: Kangaroo Island (J. G. O. Tepper). Type, I. 4403.

In general appearance close to the male of *elegantulus*, but the head is smaller, with sparser and smaller punctures, non-strigose, entirely red, and jaws much smaller (on the male no larger than on the female of that species); the sexes also do not differ in the colour of the prothorax. From *ruficollis* it differs in its larger size, pale head, and metallic elytra. *Subsimilis* has the head almost entirely black, legs black, and prothorax with much more distinct punctures. The distance between the eyes of the male is about equal to the width of the clypeus, in the female it is distinctly more. On one specimen the base of the head, and on another the hind knees are infuscated; the Sheffield specimen has a conspicuous coppery-green gloss on the elytra.

DITROPIDUS CAERULEIPENNIS, n. sp.

♂. Head (base infuscated), basal half of antennae (the club blackish), prothorax (partly infuscated), and parts of front and middle legs reddish; elytra metallic-blue; under-surface and most of legs blue or greenish-blue. Under-surface with moderately dense pubescence, shorter and sparser on legs, and still shorter and sparser on head.

*Head* with fairly dense and rather coarse, sharply defined punctures: median line distinct but shallow. Eyes widely separated. *Prothorax* at base about twice as wide as the median length, sides strongly rounded; punctures small and not very dense, a marginal row of larger ones on each side. *Elytra* no longer than the basal width; with rows of rather large punctures, on sides no larger but set in deep striae. *Abdomen* depressed in middle, with a shallow apical fovea. *Legs* stouter than usual, but not very long. Length (♂, ♀), 3.75-4.25 mm.

♀. Differs in having slightly smaller jaws, eyes more widely separated, club thinner, abdomen larger, more convex, the fovea much larger and deeper, and the legs slightly shorter and much thinner.

*Hab.*—North-western Australia (Macleay Museum).

The bright blue elytra, with conspicuous rows of punctures, reddish prothorax (although usually largely infuscated), and powerful legs of the male render this a very distinct species. The blue is as in *abdominalis*, *coelestis*, and *vigilans*. The infuscation of the base of the head is usually encroached upon by a reddish triangle; the infuscation of the pronotum is pronounced and extensive on most of the specimens, leaving only parts of the base and apex reddish; the red parts of the legs are usually obscure and confined to the femora. The pubescence is rather longer than usual,

more noticeably on the basal segment of the abdomen of the male than elsewhere. The male has an abdominal fovea but it is much smaller and shallower than that of the female, and the abdomen is otherwise different. One male has the head and prothorax entirely bright red; and one female has the elytra purple.

*C. Elytra and prothorax entirely dark.*

*C. 1. Legs more or less red.*<sup>(4)</sup>

DITROPIDUS OBLONGIPENNIS, n. sp.

♂. Coppery, sometimes coppery-green; labrum, antennae (club infuscated), palpi, and legs (claws infuscated) red. Head, under-surface, and legs with rather sparse white pubescence.

*Head* with dense and sharply-defined punctures, but also shagreened; median line shallow. Eyes very widely separated. *Prothorax* more than twice as wide as the median length; with dense and rather coarse punctures, becoming frequently confluent (or substrigose) on sides. *Elytra* oblong, slightly more than twice the length of the prothorax along middle; with rows of fairly large punctures, on the sides set in distinct striae; interstices slightly wrinkled near sides, elsewhere with minute punctures. *Legs* rather stout. Length (♂, ♀), 2.75-3.25 mm.

♀. Differs in being more robust, eyes more distant, median line of head more distinct, club and legs thinner, sides of prothorax more strongly rounded, elytra parallel-sided almost throughout (on the male feebly decreasing in width posteriorly), and abdomen larger, with a large, round, deep, apical fovea.

*Hab.*—Tasmania (Blackburn's collection): Frankford (J. J. Towers), Launceston (on *Pultenaea*, Aug. Simson's, No. 2585), Hobart (on "wattle" foliage in August, H. H. D. Griffith); Victoria: Alps (Blackburn's No. 4818); New South Wales: Forest Reefs (A. M. Lea). Type, I. 10982.

I have known this species for a long time as *pastus*, but in error; a cotype of that species (marked "type") in the Blackburn collection has small punctures on the middle of the prothorax, and at the apex and sides is densely strigose, the present species has dense and (for the genus) coarse punctures (much coarser than on the cotype) and the middle of its apex is not strigose, the sides are strigose but not so densely or finely, many of the strigosities being really due to confluence of punctures. From *ochropus* it differs in the

(4) On some described varieties entirely dark.

much coarser prothoracic punctures. It is rather more elongate than *lentulus*, the prothoracic punctures decidedly coarser, the sides substrigose, legs brighter, etc. In appearance some specimens are close to females of *elegantulus*, but are longer, prothorax with more conspicuous punctures, etc. The female is usually more coppery than the male, but occasionally is greenish-blue, or bluish-green; the hind femora are usually infuscated at the base, but on several specimens from Forest Reefs they are infuscated almost throughout. From some directions the median line of the head appears to dilate to a wide fovea, but it is really shallow throughout.

DITROPIDUS ALBICEPS, n. sp.

♂. Coppery, sometimes with a slight purplish gloss; labrum, antennae (tips of the joints of the club infuscated), palpi and legs (claws infuscated) flavous, or reddish-flavous. Head and sides of metasternum densely clothed with white pubescence, rest of under-surface and legs more sparsely clothed.

*Head* shagreened and with dense but more or less concealed punctures; median line feeble. Eyes rather widely separated. Antennae somewhat longer than usual in genus. *Prothorax* more than twice as wide as the median length; with dense and small punctures, the sides very densely and finely strigose. *Elytra* suboblong; with rows of punctures of moderate size, becoming larger and set in deep striae on the sides, interstices slightly shagreened. *Legs* stout but not very long. Length (♂, ♀), 2.75-3.25 mm.

♀. Differs in being more robust, head less densely clothed (and in consequence with the punctures and median line more distinct), eyes more distant, club and legs thinner, elytra less narrowed posteriorly, and abdomen larger, with a large, round, deep, apical fovea.

*Hab.*—South Australia: Oodnadatta (Blackburn's collection). Type, I. 10990.

Allied to the preceding species, but elytra slightly less oblong, head, especially of male, more conspicuously clothed (so that it appears quite white), eyes less distant, prothorax with much smaller punctures, its sides more closely strigose (causing the surface there to appear almost shagreened), elytra slightly shagreened, and legs paler. It is apparently close to the description of *costatus*, but although the prothoracic punctures are dense they could not be regarded as coarse, the elytra also have three, instead of two interstices costate on each side, the head is densely clothed, and only the tips of the joints of the club are infuscated. It is



certainly very different to a species I have doubtfully identified as *costatus*.

C. 2. *Legs entirely dark.*<sup>(5)</sup>

DITROPIDUS STRIGICOLLIS, n. sp.

♂. Bright coppery-bronze; basal half of antennae obscurely reddish. Head, under-surface, and legs with white pubescence.

*Head* shagreened and with small dense punctures; median line wide and not very shallow. Eyes separated about the length of four basal joints of antennae. *Prothorax* at apex as wide as the median length, sides strongly rounded; densely and finely strigose all over, but with a few punctures in middle. *Elytra* suboblong, slightly shagreened; with series of small punctures, becoming larger and set in rather weak striae on the sides. Length, 2 mm.

*Hab.*—South Australia: Port Lincoln (Blackburn's collection). Type (unique), I. 10854.

A small metallic species, with densely strigose prothorax; at first glance it appears to belong to *brachysomus*, but that species has the strigae on the sides of the prothorax replaced by rather coarse punctures; *odewahni* has reddish legs and sides of prothorax nonstrigose; from *aurichalceus* it differs in being smaller, less rounded, legs entirely dark, and eyes more widely separated.

DITROPIDUS ROTUNDATUS, n. sp.

♂. Coppery-bronze, two basal joints of antennae obscurely diluted with red. Head, under-surface, and legs with white pubescence.

*Head* shagreened and with small dense punctures; median line rather shallow. Eyes moderately separated. *Prothorax* at sides more than twice as wide as the median length, sides strongly rounded; with small, dense punctures in middle, becoming elongated at apex and towards sides, the sides themselves densely and finely strigose. *Elytra* scarcely longer than the basal width, sides rather strongly narrowed; with rows of fairly large punctures, becoming larger and set in deep striae on the sides; interstices with very small dense punctures, or finely shagreened. *Legs* rather stout, front ones slightly longer than hind ones. Length (♂, ♀), 2.5-2.75 mm.

♀. Differs in being more robust, elytra less narrowed posteriorly, legs thinner, the front ones no longer than the hind ones, and in the abdomen.

(5) On some described varieties partly reddish.

*Hab.*—Western Australia: Geraldton (Blackburn's collection from E. Meyrick). Type, I. 10910.

A small wide species, in some respects close to the description of *duboulayi* (also from Geraldton), but elytra not "viridiaeneis," being of the same colour as the prothorax, the legs are also entirely dark, and the head is not "remotely punctured," being densely punctured and shagreened. The distance between the eyes of the male is about equal to the length of the two basal joints of antennae, in the female it is about one-third more.

*C.* 3. *Minute species, usually entirely glabrous.*

DITROPIDUS ROTUNDIFORMIS, n. sp.

♂. Black with a slight or moderate bronzy gloss, basal half of antennae flavous, the club infuscated, labrum and parts of front legs obscurely diluted with red. Glabrous.

*Head* shagreened and with minute punctures; median line lightly impressed. Eyes rather widely separated. *Prothorax* about thrice as wide as long, sides strongly rounded; with dense and fairly large, sharply defined punctures. *Elytra* scarcely as long as the basal width, sides beyond middle strongly rounded; with series of small punctures, becoming larger and set in deep striae on sides. *Sterna* with dense sharply defined punctures. Length (♂, ♀), 1.75-2 mm.

♀. Differs in having eyes slightly more apart, legs slightly shorter, and abdomen foveate.

*Hab.*—Queensland: Cairns district (A. M. Lea). Type, I. 10916.

A small round species, although quite an ordinary looking member of the genus so far as the outlines and punctures are concerned (these being much as those of *venustus* and *caeruleus*); *punctulum* is much smaller, and with the prothorax shagreened instead of strongly punctate. At a glance all the legs appear to be black, and the dilution of parts of the front ones (sometimes the apical portion only of the tibiae) is not very pronounced on any of the specimens (six) before me.

DITROPIDUS RIVULARIS, n. sp.

♂. Black; clypeus, labrum, mandibles, basal half of antennae, palpi, and parts of legs flavous (sometimes rather obscurely so). Glabrous.

*Head* opaque and apparently impunctate; median line scarcely defined. Eyes widely separated. *Prothorax* opaque (less so in middle than elsewhere), more than thrice as wide

as the median length, sides strongly rounded; punctures scarcely visible. *Elytra* briefly suboblong; with rows of rather small but distinct punctures, on the sides set in rather deep striae. *Legs* rather stout, front ones longer than hind ones. Length ( $\sigma$ ,  $\text{♀}$ ), 1.75-2 mm.

$\text{♀}$ . Differs in being larger and more robust, head, eyes, and jaws smaller, clypeus darker than labrum, abdomen larger, more convex, and with a large apical fovea, legs shorter and the front ones no longer than the hind ones.

*Hab.*—Western Australia: Capel River (W. D. Dodd), Vasse and Swan Rivers (A. M. Lea), Type, I. 10929.

The jaws of the male are stout and dilated on the front edge, so that the labrum appears considerably smaller than on other species, but on the female the jaws are much smaller and the labrum of normal size; the distance between the eyes of the male is about equal to the length of the six basal joints of antennae (these being rather shorter and stouter than usual), in the female the actual distance is the same, but owing to the antennae being shorter the distance is about equal to the seven basal joints. The tarsi knees and hind femora are the usual parts that are darker than the rest of the legs, but sometimes the tarsi are no darker than the tibiae, occasionally the middle femora are also dark; the opacity of the head and prothorax (also parts of the under-surface) is due to very fine shagreening, the elytra are highly polished.

#### DITROPIDUS TENUIFRONS, n. sp.

$\sigma$ . Black, head (infuscated about base), antennae (club infuscated), palpi and legs (femora excepted) more or less flavous. Glabrous.

*Head* shagreened and with minute punctures. Eyes large and close together. *Prothorax* about thrice as wide as the median length, sides strongly rounded; punctures small, but fairly distinct. *Elytra* short, sides rounded posteriorly; striated almost throughout. Length ( $\sigma$ ,  $\text{♀}$ ), 1.5-1.75 mm.

$\text{♀}$ . Differs in having the head darker, and in the usual particulars of the eyes, legs, and abdomen.

*Hab.*—Northern Queensland (Blackburn's collection), Cairns district (A. M. Lea). Type, I. 10864.

In appearance somewhat like *brevicollis*, but consistently smaller, prothorax with distinct punctures (those towards the base become somewhat aciculate), and elytral striae very different; the apical half of the elytra has distinct striae from the sides to the suture (deeper on the sides than elsewhere), but about the base the short subsutural ones change to series of punctures. The distance between the eyes

of the female is slightly less than the length of the basal joint of antennae, in the male it is only about half its length. The legs are sometimes almost entirely flavous, but usually the middle and hind ones, or the hind ones only, are infuscated; the elytra are sometimes quite as black as the prothorax, but are usually obscurely paler (dark brown).

DITROPIDUS SIMILIS, n. sp. ,

♂. Black; labrum, basal half of antennae, and parts of legs pale. Glabrous.

*Head* subopaque and with indistinct punctures. Eyes rather widely separated. *Prothorax* about thrice as wide as long, sides strongly rounded; punctures very small. *Elytra* short; striae and punctures much as on *vagans* and *tranquillus*. Length (♂, ♀), 1.75-2 mm.

♀. Differs in the usual particulars of eyes, legs, and abdomen.

*Hab.*—South Australia: Mount Lofty (S. H. Curnow), Port Lincoln and Adelaide (Blackburn's collection, No. 1849), Kangaroo Island (J. G. O. Tepper), Lucindale (A. M. Lea). Type, I. 10872.

At first sight apparently belonging to *tranquillus*, but head subopaque and with much less distinct punctures, punctures of prothorax slightly smaller, and of abdomen sparser, and metasternum impunctate in middle. The lateral striae of the elytra are of the usual depth, but some of the ordinary rows of punctures appear to be in striae, much as on *vagans* and *tranquillus*, although less conspicuously than on the preceding species, from which it also differs in its more widely separated eyes. On the only male in the Museum the tarsi and parts of the tibiae are obscurely pale, but on four females the middle and hind femora only are infuscated, the rest of the legs being usually of a rather bright flavous, the muzzle also is brighter than on the male; on the females the median line of the head is fairly distinct, but it appears to be absent from the male.

D. *Front angles of prothorax of male flavous.*

DITROPIDUS LATEROAPICALIS, n.sp.

♂. Black; front half of head, basal half of antennae (club infuscated), palpi, front angles of prothorax, prosternum, part of mesosternum, and most of legs flavous. Under-surface and legs scarcely visibly pubescent.

*Head* with sparse punctures; median line well defined. Eyes rather close together. *Prothorax* about twice as wide

as the median length, sides strongly narrowed to apex; with fairly dense and rather small punctures, in places becoming subaciculate. *Elytra* strongly striated throughout. *Abdomen* with a rather large but shallow apical fovea, margined with erect setae. *Front legs* slightly longer than hind ones. Length ( $\sigma$ ,  $\text{♀}$ ), 2.2-5 mm.

$\text{♀}$ . Differs in having the head black to the labrum, or at least to the clypeus, the prothorax entirely black, antennae decidedly shorter, eyes more apart, front legs no longer than hind ones, and abdomen with a larger and deeper apical fovea, without marginal setae.

*Hab.*—New South Wales: Forest Reefs and Armidale (A. M. Lea); Tasmania: West Tamar—and Launceston (Simson's collection), Huon River, Frankford, and King Island (Lea); South Australia: Lucindale (F. Secker), Mount Lofty (A. H. Elston), Kangaroo Island (J. G. O. Tepper). Type, I. 10985.

On this and the following species the antennae of the males are longer than is usual in the genus, and the five apical joints are not so suddenly clubbed. The distance between the eyes of the male is equal to the length of the basal joint of antennae, in the female it is about one-third more; the metasternum has a wide subtriangular depression on the male, but on the female it is reduced to hardly more than the median line. The elytral striae contain fairly large punctures, but as these are at the bottom of the striae, they are distinct only from certain directions; the basal segment of the abdomen is densely punctate. The hind femora are usually deeply infuscated, sometimes the middle ones as well, rarely only the four hind knees are infuscated, rarely also parts of the front legs are infuscated; the flavous portions of the head and prothorax of the males vary slightly in extent, but are always conspicuous.

#### DITROPIDUS FLAVOLATERALIS, n. sp.

$\sigma$ . Black; front half of head, basal half of antennae (the club infuscated), palpi, sides of prothorax, prosternum, mesosternum, and legs flavous. Under-surface and legs very feebly pubescent.

*Head* with rather sparse but sharply defined punctures; median line lightly impressed. Eyes moderately distant. *Prothorax* with outlines as in preceding species, but with rather stronger punctures. *Elytra* also as in preceding species, except that the punctures in the striae are larger and more defined, and that the striae themselves are not quite as deep. Length ( $\sigma$ ,  $\text{♀}$ ), 1.8-2 mm.

♀. Differs in having the prothorax, both above and below, and the mesosternum, entirely dark, less of the head flavous, antennae and legs shorter, and abdomen foveate.

*Hab.*—Tasmania: Huon River, Devonport and Burnie (A. M. Lea); South Australia: Port Lincoln (Blackburn's collection, No. 1110), Kangaroo Island (J. G. O. Tepper), Mount Gambier (Lea). Type, I. 10996.

Close to the preceding species, but smaller, eyes more apart, punctures in the striae more pronounced, flavous parts of the prothorax usually extending to the base on each side, although wider in front, metasternum scarcely differing sexually, and legs nearly always entirely flavous; on a few specimens the hind femora only are infuscated; on one male the flavous part of the head extends almost to the base. The distance between the eyes of the male is almost equal to the length of the three basal joints of antennae, in the female it is slightly more.

Var. Two males, from Forest Reefs, have the legs almost entirely dark and the prothoracic markings reduced to a small spot on each side of the apex.

#### DITROPIDUS MINUTUS, n. sp.

♂. Black; most of head, basal half of antennae (the club almost black), palpi, front angles of prothorax, prosternum, and parts of legs flavous. Under-surface and legs scarcely visibly pubescent.

Outlines much as in two preceding species. *Head* with feeble punctures and median line. Eyes separated about the length of two basal joints of antennae. *Prothorax* with sparse and minute punctures. *Elytra* punctate-striate throughout, striae all sharply defined at summit of apical slope, but rather feeble on basal half near suture. Length (♂, ♀), 1.5-1.75 mm.

♀. Differs in having prothorax entirely and head almost entirely black, and in the usual particulars of eyes, legs, and abdomen.

*Hab.*—Victoria (R. J. Burton), Dividing Range (Blackburn's collection, No. 5848), Gisborne (H. H. D. Griffith); Tasmania: Launceston and Turner's Marsh (Simson's collection, No. 3800), Launceston and Hobart (Blackburn), Hobart, Mount Wellington. Huon River, Swansea, Frankford, Wilmot, and Burnie (A. M. Lea). Type, I. 10870.

Allied to the two preceding species, but smaller, antennae of male scarcely longer than in the female, and the club of normal width, prothoracic punctures decidedly smaller, and middle of mesosternum black in both sexes. The front legs

are often entirely pale, or with the knees slightly infuscated, the hind legs often entirely dark, the middle femora are sometimes flavous, except for the knees, but usually only the basal half of their femora is pale; the males usually have more of the legs pale than the females.

DITROPIDUS PALLIPES, n. sp.

♂. Black; head, basal half of antennae (the club infuscated), palpi, front angles and sides of prothorax, prosternum, mesosternum, and legs bright flavous. Glabrous.

*Head* with small punctures, median line terminating in a small fovea between the eyes. Eyes separated slightly more than the length of basal joint of antennae. Antennae rather longer than usual, the club almost continuous in width with basal portion. *Prothorax* about thrice as wide as long, sides (for the genus) not much narrowed to apex; punctures rather sparse and small, but sharply defined. *Elytra* suboblong; strongly punctate-striate throughout. *Metasternum* with a wide, shallow, median depression. *Abdomen* with a large but shallow apical fovea. Front *legs* stouter and slightly longer than hind ones. Length, 2 mm.

*Hab.*—Victoria: 'Dividing Range (Blackburn's collection). Type, I. 10917.

With strongly striated elytra somewhat as in the *jacobyi* group, but prothorax with front angles and sides flavous. It is flatter and more parallel-sided than *lateroapicalis* and *flavolateralis*, the prothorax is shorter and much less narrowed to the apex, and the elytral striae are less divergent from the suture; the antennae, however, are much as on those species. The flavous parts of the prothorax narrowly occupy each side, and are continued across about one-fourth of the apex. The scutellar lobe is shorter than usual, and its notch is very minute; the discal striae of the elytra are almost all parallel with the suture, even the short subsutural one being much less oblique than is usual in the genus. The colours of the prothorax and sterna, the wide depression on the metasternum, the front legs, antennae, and the comparatively small abdomen sloping to both base and apex of the type, are essentially masculine, but it has a large fovea at the apex of the abdomen, which, although decidedly shallower than in females, is quite distinct.

A second specimen (from Nelson, in the Blackburn collection) may be a female of the species, it has similar elytral striae, but has the head (except labrum), prothorax (this with more distinct punctures, especially on the sides), and sterna black, antennae shorter, front legs no longer or

stouter than the hind ones, hind femora infuscated, median line of metasternum not dilated, and abdominal fovea larger and much deeper.

*E. Miscellaneous.*

*DITROPIDUS CARINATUS*, n. sp.

♀. Chocolate-brown; scutellum, suture, metasternum, and abdomen black; muzzle, antennae, palpi, prosternum, and legs (hind femora infuscated) flavous. Under-surface and legs scarcely visibly pubescent.

*Head* shagreened. Eyes large and almost touching. *Prothorax* about thrice as wide as the median length, sides strongly rounded; shagreened and aciculate-punctate throughout. *Elytra* short; with rows of large punctures in deep striae; all the interstices acutely carinated throughout. *Abdomen* shagreened; the two basal segments with rather dense punctures, apical segment with a large, deep fovea. *Legs* rather short. Length, 2.25 mm.

*Hab.*—Victoria: Dividing Range (Blackburn's collection). Type (unique), I. 10878.

Allied to *jacobyi*, but readily distinguished from that species and all its allies by the shagreened prothorax.

*DITROPIDUS FLAVOAPICALIS*, n. sp.

♂. Black; labrum, basal half of antennae (the club infuscated), tips of elytra, pygidium, and legs more or less flavous. Glabrous.

*Head* opaque and with minute punctures; median line very feeble. Eyes rather wide apart. *Prothorax* fully thrice as wide as the median length, sides strongly rounded, scutellar lobe short; impunctate or almost so. *Elytra* short; with rows of rather small punctures, becoming larger and set in fairly deep striae on both sides. Intercoxal process of *mesosternum* rather large and with dense punctures. *Front legs* slightly longer than hind ones. Length (♂, ♀), 1.9-2 m.m.

♀. Differs in having eyes slightly more apart, median line rather wide and shallow, tip of elytra scarcely paler than the adjacent surface, legs and pygidium more obscure, front legs no longer than hind ones, and abdomen larger, more convex, and with a large apical fovea.

*Hab.*—Western Australia: Warren River (W. D. Dodd). Type, I. 10919.

Very close to *brunneipennis*, of which I was at first inclined to regard it as a variety, but the head, although slightly shagreened, is not at all coppery, and the elytra are distinctly striated only on the sides, elsewhere the punctures



in the rows are sometimes close together, but at the summit of the apical slope they are not all set in striae as on that species. The distance between the eyes of the male is about equal to the four basal joints of antennae, in the female it is slightly more; the prothorax of the female has very small but distinct punctures, but except on very close examination they appear to be absent from that of the male. On the two males before me the flavous tips of the elytra are very conspicuous, but on the only female the tips are very obscure, and the pygidium is no paler than the rest of the abdomen.

DITROPIDUS MACROCEPHALUS, n. sp.

♂. Black; labrum, basal half of antennae, palpi, and tarsi more or less obscurely diluted with red. Glabrous.

*Head* opaque and unusually wide, median line very feeble; clypeus rather large and triangularly notched in front; jaws large and prominent. Eyes widely separated. Antennae short, joints of the club close together. *Prothorax* opaque, more than thrice as wide as long, sides moderately rounded, median lobe short and feebly notched. *Scutellum* very minute. *Elytra* slightly shorter than the basal width; slightly shagreened, with inconspicuous rows of punctures, but on the sides set in fairly deep striae. *Legs* not very long, front ones longer than hind ones, their tibiae flat and somewhat curved. Length (♂, ♀), 1.75-2 mm.

♀. Differs in having the head much smaller, clypeus not triangularly notched, jaws much smaller, prothorax much narrower in front, elytra slightly longer, legs shorter, the front ones no longer than the hind ones, and abdomen larger, more convex, and with a large, round, deep, apical fovea.

*Hab.*—Australia (old collection); Western Australia: Geraldton, Swan River, and Bridgetown (A. M. Lea); South Australia: Mount Lofty (A. H. Elston), Port Lincoln (Lea). Type, I. 10931.

A small, short species, that I was inclined at first to regard as belonging to a new genus. The elongated clypeus triangularly notched in the male is decidedly aberrant, but the powerful jaws, although not common in the genus, occur in several species. The head and prothorax under a hand-lens appear to be impunctate, but under a compound power their opacity is seen to be due to very dense and minute punctures. The distance between the eyes of the female is a trifle less than in the male, but this is due to the much smaller size of its head; on the male, owing to its large head, the front of the prothorax is not much narrower than its base; the intercoxal process of the prosternum is gently

incurved at its hind end, in front on the female it is flat, but on the male its front edge is elevated to form a partial protection to the muzzle; both it and the process of the mesosternum have rather dense and sharply defined punctures.

#### EUEDITROPIDUS, n.g.

Eyes widely separated. Antennae short; club six-jointed, its joints not very lax. Scutellar lobe notched. Intercoxal process of prosternum transverse, its hind end gently incurved to middle. Other characters as in *Ditropidus*.

This genus practically differs from *Ditropidus* only by the club having an additional joint, and as that has been considered a generic feature by both Baly and Chapuis, it appeared to be undesirable to refer the four species, agreeing in having the extra joint, to that genus. Type of genus, *variabilis*.

#### EUEDITROPIDUS VARIABILIS, n. sp.

♂. Black and reddish-flavous. Head, under-surface, and legs with sparse, whitish pubescence.

*Head* wide, median line rather wide and shallow; with dense and small punctures. *Prothorax* about thrice as wide as the median length, sides strongly rounded; punctures minute and not very dense. *Scutellum* small, subovate, slightly concave. *Elytra* about as long as the basal width, sides rather strongly narrowed posteriorly; with rows of fairly large punctures, on each side set in three deep striae; interstices with minute punctures. *Legs* stout, front ones longer than hind ones. Length (♂, ♀), 3.75-4.25 mm.

♀. Differs in having the head smaller, eyes slightly more apart, elytra less narrowed posteriorly, and with smaller punctures, abdomen larger, more convex, with a large, round, deep, apical fovea, and legs thinner, with the front ones no longer than the hind ones.

*Hab.*—New South Wales: Tweed River, on *Ficus* sp. (W. W. Froggatt). Type, I. 10932.

No two of the six specimens before me are exactly alike in colour. The type male is flavous, with the joints of the club and the elytra black, the latter, however, with a narrow basal strip (touching neither suture nor sides) flavous, a spot at the apex of each of the front and hind femora, and parts of the upper-surface of the tibiae are infuscated; a second male is close to it, but has the pale basal portion of the elytra about twice as long. The four females have the head, except the labrum and ocular canthi (on one specimen including the canthi), under-surface (except some of the side parts), and legs (except tarsi) black, the prothorax and elytra with very

variable markings: the prothorax is black with a medio-apical portion pale, the pale portion on two specimens continued along the front edge almost to the margins, on another it is so continued and has, as well, a narrow strip extending along the median line almost to the base; on the elytra the black markings of one female are the base, suture (both narrowly), a small spot at the basal third of the latter, and the sides and apex irregularly; a second female agrees with it except that it has a small free spot half way between the sutural spot and each side; a third female has all the marginal markings extended and the free spot rather large; the fourth female has the markings still more extended, so that the sutural spot is continued to each side (across the free spot of other specimens) forming an irregular fascia slightly before the middle.

EUDITROPIDUS NIGER, n. sp.

♀. Black; labrum, five basal joints of antennae (the others infuscated), palpi and parts of upper-surface of tarsi more or less flavous. Head, under-surface, and legs with short, whitish pubescence.

*Head* with rather dense and small but sharply defined punctures; median line narrow at base, but dilated in front. *Prothorax* about twice as wide as the median length, sides strongly narrowed to apex; with small but fairly distinct punctures. *Elytra* short; with rows of not very large punctures, on each side set in three fairly deep striae; interstices with minute punctures. *Abdomen* with a very large apical fovea. Length, 3.3-25 mm.

*Hab.*—New South Wales: Dorrigo (W. Heron). Type, I. 10901.

At first glance quite an ordinary-looking *Ditropidus*, but the antennal club distinctly six-jointed. On each of the two specimens before me the elytra have a vague bluish gloss.

EUDITROPIDUS ERYTHRODERES, n. sp.

♀. Black; a narrow inter-ocular space, labrum, five basal joints of antennae, prothorax (extreme base excepted), and under-surface, including pygidium red. Head, prothorax, and under-surface with very short, pale pubescence.

*Head* with dense and small punctures; median line narrow at base, dilated in front. *Prothorax* and *elytra* with outlines and punctures as described in preceding species. *Abdomen* with a very large apical fovea. Length, 3.25 mm.

*Hab.*—Queensland: Mount Tambourine (A. M. Lea). Type (unique), I. 4405.

In general appearance strikingly close to several species of *Ditropidus* (*fugitivus*, *subsimilis*, *semierudus*, and the male of *elegantulus*), but club of antennae distinctly with six joints, instead of five, as on those species.

EUDITROPIDUS PALLIDUS, n. sp.

♂. Flavous, extreme base of prothorax and part of abdomen infuscated. Head, under-surface, and legs with very short pubescence.

*Head* with small, dense, inconspicuous punctures, but becoming sharply defined on clypeus; median line shallowly impressed. *Prothorax* about twice as wide as the median length, sides strongly narrowed to apex, somewhat gibbous in front; punctures small but rather sharply defined, denser on sides than in middle. *Elytra* suboblong; with rows of fairly large punctures, becoming smaller posteriorly, and on each side set in three deep striae; interstices with very minute punctures. Front legs slightly longer than hind ones. Length (♂, ♀), 2.25-2.75 mm.

♀. Differs in being more robust, eyes rather more apart, prothorax shorter, abdomen larger, more convex, and with a very large apical fovea, antennae and legs thinner, and the front legs no longer than the hind ones.

*Hab.*—South Australia: Leigh Creek (Blackburn's collection). Type, I. 10975.

A short, robust species, with vaguely mottled prothorax, at first glance resembling some of the pale forms of *Polyachus geminus*; in general appearance it is very different from each of the three preceding species, but as the club is certainly six-jointed and the scutellar lobe notched it has been associated with them. On the female the metasternum, as well as part of the abdomen, is sometimes infuscated; on one specimen the abdomen is entirely pale; the club of the antennae is usually no darker than the basal joints, but is sometimes slightly infuscated.

ELAPHODES VULPINUS, Suff.

*E. illotus*, Lea.

*E. illotus* was named from a single female, but there are now thirty specimens before me (from New South Wales, Victoria, and South Australia), and these indicate that the species is probably the most variable one of the genus; and also that *vulpinus*, for which an exact locality was not given, was founded upon other females.

The male may be readily distinguished from males of other species by the jaws, these being much larger than usual,

projecting strongly downwards, and bent at right angles at the basal third; the labrum is also unusually large and shining; the antennae are considerably longer than on the female, the tip of the apical joint is noticeably curved and pointed, the prothorax is more transverse and very little narrowed in front, the abdomen is smaller, incurved to middle, and with a glabrous space marking the position of the fovea of the female; the front legs are somewhat longer, with the basal joint of the tarsi larger.

The dark markings are very variable on both sexes; on the prothorax there are frequently two parentheses marks enclosing an elongated line, and a spot on each side . ( | ) . , sometimes there are two spots on each side, frequently each parenthesis mark is split up into two spots, and occasionally all are absent, or confused together. On the elytra there is often a median fascia: complete, interrupted in the middle, or represented by a row of ten or twelve spots; or there may be two—the second one near the base, and the two fasciae may be more or less connected; occasionally there is a large dark blotch about the scutellum; the dark markings of the head, under-surface, and legs also vary. On some specimens of both sexes the derm is of a rather pale castaneous, except that there is a narrow black line where the prothorax and elytra touch; their clothing is also entirely white; the females of such specimens somewhat resemble pale abraded ones of *pilula* and *rutilus*, but are more oblong; the males, however, may be at once distinguished by the jaws.

#### ELAPHODES CERVINUS, Suff.

##### *E. tigrinus*, Chp.

The type of *E. cervinus* appears to be a specimen on which the two apical spots on each elytra are conjoined, and the outer part of the basal zigzag fascia almost separated as a spot on each side; there are several such specimens before me.

*E. tigrinus* was described as having two transverse fasciae on the pronotum, but these are rarely distinct and are often quite absent; the elytral markings are due mostly to dark patches of pubescence, and if this is abraded they may disappear; on each elytron there are usually two spots (sometimes conjoined) near the apex, and one on the side near them, the irregular subbasal fascia at its middle is V-shaped, and there is usually a round spot half way between its tip and the scutellum, the V, however, is often obscure; the metasternum is usually black or infuscated. There is frequently a median line of golden pubescence on the

pronotum, and the middle of its derm often has a large blackish blotch. The species occurs in New South Wales, Victoria, Tasmania, and South Australia.

*ELAPHODES AENEOLUS*, Chp.

On the male of this species the prothorax is sometimes dark, except for very narrow pale margins, and the elytra are often dark, except that the sides and apex are flavous. On the female the metasternum is black and the abdomen flavous; on the male the black extends to about the middle of the abdomen; the male also has more of the head black than the female. The pubescence is of a beautiful golden-yellow, mixed with semi-upright hairs.

*ELAPHODES MURINUS*, Chp.

Described as from Rockhampton in Queensland; the only specimens I have seen of it are from New South Wales and Victoria. It is a large species, distinct by the entirely black derm of its prothorax and elytra.

*ELAPHODES SCUTELLARIS*, Chp.

Four females, measuring 2-3 mm. in length, from New South Wales and Victoria, may belong to this species; no two are exactly alike in colour, but they all have the metasternum black, and the apical half of the antennae dark (the description implies that the antennae are entirely pale). One agrees well with the description, except for the partly dark antennae, and that the base of the abdomen is infuscated, another is very similar except that the discal blotch of the pronotum is very ill-defined, and that the abdomen is entirely pale; these both have very ill-defined elytral markings in addition to the circum-scutellar one; two smaller specimens have no discal markings on the prothorax, and the elytral markings are very faint.

A male (2.25 mm.) from Sydney, possibly belongs to the species, but has the prothorax almost entirely infuscated, and the elytra dark except for four flavous spots on each: a rather large subapical one and three submedian ones placed as if to mark the corners of an equilateral triangle; the middle of its prosternum and base of abdomen, as well as the metasternum, are blackish. A male of similar size, from Victoria, has the prothorax similarly coloured, and more of the under-surface dark; but it has a large and very conspicuous flavous spot on each elytron, the spot fully one-third its length and occupying almost its entire width (the two narrowly touching at the suture); on one of the smaller

females a spot somewhat similar in size and shape is vaguely indicated.

ELAPHODES RUFOVARIUS, Chp.

Some specimens from Longreach and Cloncurry (Queensland) probably belong to this species, described from a female; they have three series of longitudinal flavous vittae on the elytra, so placed that they might be regarded as interrupted fasciae; and a small subapical flavous spot; the metasternum is sometimes deeply infuscated. The males are smaller than the females, the length ranging 4-6 mm.

ELAPHODES EPILACHNOIDES, Chp.

On this species each shoulder is usually deep black, although on an occasional specimen it is but lightly infuscated; the median fascia is advanced along the suture, usually, but not always, triangularly; the prothorax usually has a conspicuous spot on each side of the base, but occasionally these are conjoined, rarely they are entirely absent; the metasternum is usually black, and the abdomen is sometimes partly dark; but occasionally the under-surface is entirely pale; on one female the elytral fascia is interrupted before each side, and the left spot on the pronotum is broken up into two. The species occurs in Southern Queensland, as well as in New South Wales.

ELAPHODES AMICTUS, Chp.

A specimen in the Blackburn collection received from Chapuis with a label "*Elaphodes amictus*, Chp. type," is probably a cotype; it does not agree with the description, however, as the elytra are without an isolated round spot before the fascia. It is a specimen of *epilachnoides*, having the under-surface pale, the prothoracic spots absent, and the humeral spots only moderately infuscated. If the specimen is correctly named, *amictus* must be regarded as a variety only of *epilachnoides*.

ELAPHODES SIGNIFER, Chp.

Numerous specimens from South Australia (Adelaide, Nuriootpa, and Lucindale), and New South Wales (Sydney), appear to belong to this species, which may be distinguished by the elytra having three transverse series of lines of pubescence (varying on different specimens from white to golden), covering parts of the derm that are slightly paler than the adjacent parts. The type was described as having on the middle of the pronotum a large brown spot, but the spot is sometimes broken up into two or three, and occasionally there are small isolated spots; the head is

occasionally immaculate, but there is usually an angular black spot at the base, and often one or two between the eyes. The female is larger (4.4-5 mm.) than the male (3.3-5 mm.).

ELAPHODES ZICZAC, n. sp.

♂. Dingy reddish-brown; antennae (club infuscated), elytra (some parts darker), most of under-surface and legs more or less reddish. With rather dense and mostly pale pubescence.

*Head* with dense and (where not concealed by clothing) sharply defined punctures. *Prothorax* strongly and evenly convex, apex scarcely one-fourth less than base; punctures as on head. *Elytra* with crowded asperate punctures; striae rather lightly impressed, but deeper on sides. Length, 3.75-4.5 mm.

♀. Differs in being more robust, eyes more apart, legs somewhat thinner, and abdomen with a large apical fovea.

*Hab.*—Queensland: Bundaberg (Blackburn's collection), Rockhampton (A. M. Lea). Type, I. 10881.

The scutellum and the extreme base of both prothorax and elytra are black. On the prothorax of one specimen there are eight spots on which the pubescence is darker than on the adjacent surface, but four of them are very indistinct, on two other specimens only four spots are in evidence, and on another not one is distinct; on the elytra, however, each specimen has a large sutural spot at the basal third and extending from it a zigzag fascia almost to each side; at the apical third, on each elytron, there is a large transverse spot, disconnected with all other markings, the derm at the markings darker than the adjacent surface, and the clothing on them also darker. It is a suboblong species, allied to *cervinus*, but with coarser punctures and different striae, elytral markings different, notably by the large dark blotch at the basal third, and by the absence of subapical spots; *oblongus* is less rounded, with stronger striae and very different elytral markings; *vittiger* (unknown to me, but also from Rockhampton) was described as having very different elytral markings.

ELAPHODES SIMPLEX, n. sp.

Rusty-red; extreme base of prothorax and of elytra black, some joints of antennae infuscated. Moderately densely clothed with uniformly pale pubescence. Length, 3.5-4 mm.

*Hab.*—Queensland: Cairns district (Blackburn's collection and A. M. Lea), Peel Island (Simson's collection), Brisbane (H. W. Cox). Type, I. 10884.



The outlines and punctures, except that the latter are somewhat smaller and denser, are almost as in the preceding species, and the sexual differences are the same; but the upper-surface entirely reddish, except for a narrow line where the prothorax and elytra meet, will readily distinguish it from that, as from most species of the genus; in build it is somewhat like *epilachnoides*, except that it is larger and less oblong; *rutilus* is much larger and with very different clothing; and *pilula* and *signifer* have different clothing and markings.

ELAPHODES NIGROVARIUS, n. sp.

♂. Black and red. Moderately densely clothed with pale pubescence.

*Head* with crowded punctures, becoming smaller and sparser on clypeus. *Prothorax* moderately long; punctures dense and small; a vague median line usually indicated. *Elytra* with dense and small punctures; striae well-defined on the sides, feeble or entirely absent elsewhere. Length (♂, ♀), 3-4 mm.

♀. Differs in being larger, and in the usual particulars of eyes, legs, and abdomen.

*Hab.*—South Australia (Macleay Museum): Port Lincoln (Blackburn's collection), Murray Bridge (J. G. O. Tepper). Type, I. 3837.

The general outlines are much as in the two preceding species, but the colours and finer sculpture of the elytra are very different; the clothing appears to be easily abraded, as some of the specimens in the Museum are almost glabrous. The black varies in extent and often has a distinct metallic gloss; on the head it extends from the base to midway between the eyes, sometimes almost to the clypeus, but occasionally the head is entirely red; on the prothorax it may extend over the whole surface, or (usually in the females) leave a fairly wide space on each side red; on the elytra it varies from covering almost half of the surface on some males to absent (except for narrow black lines at the base and suture) on some females, but usually is in the form of a large sub-triangular medio-basal blotch; the sterna are usually entirely black; the abdomen is sometimes entirely red (usually so in females), but one-fourth or more may be black; usually some of the antennal joints are infuscated.

ELAPHODES MULTIMACULATUS, n. sp.

♂. Of a dingy rusty-red, with numerous black or infuscated spots or markings. Moderately densely clothed with pale pubescence, becoming darker on the dark parts.

*Head* with dense but not sharply defined punctures. *Prothorax* about twice as wide as the median length, sides strongly rounded; with small and very dense punctures, and several very shallow depressions. *Elytra* (for the genus) rather elongate, almost parallel-sided to near apex; punctures as on prothorax; striae distinct only on sides, rather feeble at apex and near suture, scarcely traceable elsewhere. Length, 3-4 mm.

♀ - Differs in being larger and in the usual particulars of eyes, legs, and abdomen.

*Hab.*—Australia (old collection); New South Wales (Blackburn's collection), Cobar (H. J. Carter, from Shaw). Type, I. 10886.

Narrower than any previously described species of the genus, elytra multimaculate and prothorax with conspicuous longitudinal markings. The scutellar lobe is not notched, and this would exclude it from the genus by the table given by Chapuis; there are, however, two closely allied undescribed species that have the scutellar lobe slightly notched, but as I have seen but a single female of each they have not been named. The scutellum itself is very small, but is distinctly transverse, another unusual feature in the genus. The markings are not exactly the same on any two of the four specimens (one male and three females) before me; the head in all is obscurely blotched, except in front; the prothorax has two complete longitudinal vittae, three specimens have remnants of another towards each side, and two of these also have a short medio-apical vitta; on the elytra the spots and markings are very irregular and often angularly connected together, but on one female many spots are isolated; on the male most of the under-surface is black, and parts of the femora are infuscated; on the females the abdomen and legs are entirely pale; on one female the dark parts of the under-surface consist solely of a spot on each side of the metasternum. The punctures on the head are partly obscured by the clothing, but even where this has been abraded they are not very sharply defined, although the surface could hardly be regarded as shagreened. From above the front angles of the prothorax appear to be widely rounded off, but they are really rectangular, similarly the hind angles appear to be less, but are really more than right angles.

ELAPHODES COCCINELLOIDES, n. sp.

♀. Black and red. Moderately clothed with white pubescence, somewhat longer on upper than on under-surface.

*Head* with rather dense and sharply defined punctures; median line slightly impressed. *Prothorax* about twice as wide as the median length, sides strongly rounded; punctures dense and small. *Elytra* moderately long, sides gently rounded; punctures slightly larger and somewhat sparser than on prothorax; striae fairly distinct on sides, absent, or almost so, elsewhere. *Abdomen* with a large apical fovea. Length, 3.75-4 mm.

*Hab.*—Queensland: Brisbane (H. W. Brown and H. W. Cox); New South Wales: Hunter River (Macleay Museum). Type, I. 10954.

An oblong-elliptic species, with general outlines as in *tigrinus*, *signifer*, *simplex*, and similar species, and varying considerably in its colours. By the table given by Chapuis it could only be referred to *Elaphodes* or *Ditropidus*, and as it is clothed all over and the joints of the club are rather elongate, I prefer to refer it to the former genus; in general appearance it strikingly resembles many small Coccinellidae, especially of the genus *Rhizobius*. There are six females before me, of these the type and another specimen have the extreme base of prothorax, scutellum, and elytra (except tips) black, all other parts (except that some of the antennal joints are infuscated) being red; two others differ in having a wide median fascia (connected along the sides with the tips) on the elytra also red (on the two first specimens the fascia is hardly indicated, but in part may be traced from certain directions); the other two have the prothorax entirely black, and only the extreme tips of the elytra red, with the sterna partly infuscated.

#### COENOBIUS.

The species of this genus in general are close to *Ditropidus*, but differ in having the antennal club composed of six instead of five joints, and the scutellar lobe not notched; the latter character, however, is not very satisfactory, as it frequently happens that in the small dark species of *Ditropidus* the notch is very indistinct. I have not referred to *Ditropidus*, however, any species with the club six-jointed, or to *Coenobius* any with it five-jointed.

#### COENOBIUS LUCIDULUS, Chp.

A male from Darnley Island appears to belong to this species, but has the legs of a rather dingy flavous, with the four hind femora somewhat darker; two other males (from Northern Queensland and Port Douglas) differ from it in having the legs entirely dark. A female, from Cairns, has also entirely dark legs, but differs from the males in being

somewhat larger, 2.25 mm., eyes not so close together, and abdomen larger and more convex, with a wide and deep apical fovea.

COENOBIUS INCONSTANS, n. sp.

♂. Black, labrum, and parts of antennae and of legs more or less flavous. Under-surface and legs scarcely visibly pubescent.

*Head* with rather sparse but distinct punctures. Eyes close together. *Prothorax* at apex much narrower than the median length, sides strongly narrowed from base to apex; with rather sparse and small, but sharply defined punctures in middle, becoming denser and coarser on sides; a distinct row margining base. *Elytra* oblong; with rows of rather large punctures, on the sides set in deep striae; interstices with very minute punctures. Front *legs* slightly longer than hind ones. Length (♂, ♀), 1.75-2 mm.

♀. Differs in being larger and more robust, elytra with smaller punctures, abdomen larger, more convex, with a large apical fovea, legs thinner and the front ones no longer than the hind ones.

*Hab.*—Queensland: Mount Tambourine (A. M. Lea); New South Wales: Armidale and Forest Reefs (Lea), Jenolan (J. C. Wilurd), Leura (R. J. Burton), Sydney (Dr. E. W. Ferguson). Type, I. 10933.

Structurally close to *lucidulus*, but not at all blue. The distance between the eyes of the female is about equal to the length of the basal joint of antennae, in the male it is decidedly less; on many specimens there are two large punctures between the bases of the antennae. The legs vary from entirely flavous, except for a slight infuscation of the tarsi, to almost entirely infuscated, but the front legs are often paler than the others; variable numbers of the antennal joints are pale, but usually the six joints of the club are darker than the others; three females and one male have the head entirely pale, but usually only the labrum; and that rather obscurely, is flavous: one female (from Jenolan) has the head and legs (except a slight infuscation of the tarsi) entirely pale, and a wide pale space on each side of the prothorax; another female, on the same card, has the base of the head infuscated and the sides of the prothorax obscurely paler than the middle.

Var.? A female, from Galston, probably belongs to this species, but has the head, prothorax (except at the extreme base), and legs entirely flavous, the metasternum and abdomen obscurely diluted with red; the prothorax with fairly large punctures in the middle, and a rather deep oblique impression

on each side (the impressions are hardly more than indicated on the typical form).

COENOBIUS PARVONIGER, n. sp.

♂. Black; labrum, basal joints of antennae, and parts of legs obscurely paler. Under-surface and legs scarcely visibly pubescent.

*Head* with rather large punctures in front. Eyes large and almost touching. *Prothorax* at base not twice as wide as the median length, sides strongly rounded; punctures sparse and minute. *Elytra* briefly suboblong; with rows of fairly large punctures, on the sides set in deep striae. Length, 1.75 mm.

*Hab.*—Queensland: Cairns. Type (unique), I. 10869.

In general appearance rather close to the preceding species, but more compact, eyes even closer together, and prothorax almost impunctate, even on the sides.

COENOBIUS BINOTATUS, n. sp.

♂. Black; labrum, basal joints of antennae, a large spot on each elytron, and sometimes the tips, reddish. Under-surface and legs slightly pubescent.

*Head* rather coarsely sculptured in front. Eyes large and close together. *Prothorax* not twice as wide as the median length, sides strongly narrowed in front, somewhat gibbous in middle; with a few large punctures on sides, elsewhere impunctate, or almost so. *Elytra* briefly suboblong; with rows of rather large punctures, mostly in shallow striae, but on the sides in deep ones; interstices scarcely visibly punctate. *Legs* moderately stout, front ones very little longer than hind ones. Length (♂, ♀), 2.25 mm.

♀. Differs in being more robust, antennae and legs somewhat smaller, and abdomen larger, more convex, and with a large apical fovea.

*Hab.*—New South Wales: Sydney (W. du Boulay and Dr. E. W. Ferguson), Galston and Tamworth (A. M. Lea); Victoria: Birchip (J. C. Goudie, No. 234). Type, I. 10877.

The maculate elytra readily distinguish this species from all other Australian members of the genus; the large spot on each elytron is usually shaped like an obtuse-angled triangle, one of the acute angles being on or near the shoulder, the other approaching but not touching the middle of the suture; in addition to the large spots the tips of the elytra, or at least two subcontiguous spots, are also reddish on eight of the specimens before me, but on eight more the tips are dark, or at most very obscurely diluted with red, the difference is

not sexual; the tips of the tibiae and the tarsi are sometimes obscurely reddish.

POLYACHUS AMENTATUS, n. sp.

♂. Dark reddish brown with a more or less distinct metallic gloss; muzzle, five basal joints of antennae (the others infuscated), margins of prothorax, elytra (the punctures darker), and legs more or less flavous. Under-surface and legs moderately pubescent.

*Head* with sharply defined punctures of moderate size, more crowded in front than elsewhere; median line distinct only at base. Eyes very widely separated. Antennae moderately long; club six-jointed. *Prothorax* not twice as wide as the median length, sides moderately rounded. scutellar lobe small and not notched; punctures of moderate size, rather dense and sharply defined, becoming somewhat denser and larger on sides. *Elytra* suboblong; with conspicuous rows of punctures in slight striae, the lateral striae not much deeper than the others. Process of *prosternum* truncated at both ends. Length, 2.25 mm.

*Hab.*—Australia (old collection); South Australia (Macleay Museum). Type, I. 10970.

The punctures on the elytra being darker than the adjacent surface the loops at the apices of some of the rows are very conspicuous, and in this respect the species at first glance resembles *Ditropidus pulicosus*; the pale parts of the elytra are more brightly flavous than the other pale parts. From certain directions the prothorax appears to have a narrow impunctate median line. A second specimen differs from the type in having the head, prothorax (the sides obscurely diluted with red), and scutellum bronzy-black, and most of the under-surface and legs black.

POLYACHUS DOLICHOGNATHUS, n. sp.

♂. Head (parts about the eyes black), basal third or more of antennae, prothorax (extreme base black), legs (parts of tarsi infuscated), and abdomen reddish-flavous; elytra flavous, punctures more or less infuscated, sterna, and sometimes base of abdomen, black. Head, under-surface, and legs moderately, the prothorax slightly pubescent.

*Head* rather wide; with dense and sharply defined punctures, more distinct on clypeus than elsewhere; clypeus unusually long, semicircularly notched in middle of apex. Eyes widely separated. Antennae moderately long; club six-jointed. *Prothorax* about twice as wide as the median length, sides strongly narrowed to apex, scutellar lobe small;

punctures rather dense and small but sharply defined, becoming slightly larger and denser on sides. *Elytra* suboblong; with rows of not very large but distinct punctures, on the sides set in fairly deep striae; interstices with dense and minute punctures, or faintly shagreened. Hind margin of intercoxal process of *prosternum* almost truncated. Length ( $\sigma$ ,  $\text{♀}$ ), 2.5-3 mm.

$\text{♀}$ . Differs in being more robust, eyes slightly more apart, antennae less distinctly six-jointed, legs somewhat shorter, and abdomen with a large apical fovea.

*Hab.*—Australia (Blackburn's collection); South Australia (Macleay Museum). Type, I. 10965.

In general appearance strikingly close to *Ditropidus nigribasis*, and with prothoracic sculpture very similar, but the muzzle, owing to the clypeus (which scarcely varies sexually), is almost twice as long as on that species, and the club is distinctly six-jointed on the male, but on the female the sixth joint of the antennae might be regarded as belonging either to the club or to the basal portion. On one specimen the scutellar lobe appears to be feebly notched, but on six others it is not. The black parts of the head cause the eyes, at first glance, to appear much larger than they really are; the red middle part extends to the extreme base and is wider on some specimens than on others; the elytral punctures are more conspicuously infuscated on some specimens than on others.

Var. A male, from New South Wales, has three black spots on the prothorax: a large medio-apical one, and a smaller one on each side, the three narrowly connected across the apex; most of its head is also black; the apical joint of its antennae is longer, and the curved apical portion narrower and more distinct; as the curious muzzle, however, is as on the other specimens, it probably does not represent more than a variety.

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